REMARKS

Claims 13, 14, 18-24, and 27 are pending in this application. By this Amendment, claims 20 and 23 have been amended to be independent claims. Claim 19 has been amended to more particularly point out and distinctly claim the catalyst component. Entry and consideration of this amendment is earnestly requested in that it does not introduce new matter.

Claim Rejections

Rejections Under 35 U.S.C. § 112

A. Response to rejection of claim 19 under 35 U.S.C. §112, second paragraph, as being indefinite.

In response to the rejection of claim 19 under 35 U.S.C. §112, second paragraph, appropriate correction has been made. Reconsideration and withdrawal of the Rejection respectfully is requested.

B. Response to rejection of claims 13, 14, 18, 21, 22, and 27 under 35 U.S.C. §103(a) as obvious over Dall'Occo et al.

In response to the rejection of claims 13, 14, 18, 21, 22, and 27 under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,532,326 of Dall'Occo et al. ("Dall'Occo"), Applicants respectfully submit that a *prima facie* case of Obviousness has not been made out by the Examiner.

With respect to a Rejection under § 103, "a proper analysis under § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." (emphasis added) *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Neither is present in the current Rejection.

Current claim 13 is directed to an adduct comprising $MgCl_2$, ethanol and a Lewis base (LB) different from water, said adduct further comprising a fusion enthalpy lower than 100 J/g, and formula $MgCl_2 \bullet (EtOH)_n(LB)_p$, wherein n is from 2 to 6 and p is $0<p/(n+p)\leq 0.1$, where the Lewis base is selected from ethers, esters, compounds of formula RX_m, and combinations thereof, wherein

RX_m is selected from the group consisting of methanol, propanol, isopropanol, n-butanol, sec-butanol, tert-butanol, pentanol, 2-methyl-1-pentanol, 2-ethyl-1-hexanol, phenol, 4-methyl-1-phenol, 2,6-dimethyl-1-phenol, cyclohexanol, cyclopentanol, ethylene glycol, propylene glycol, 1,4-butanediol, glycerine, mannitol, polyvinyl-alcohol, acetonitrile, ethylenediamine, 3-picoline, triethanolamine, triethylamine, and diisopropylamine.

The claimed adduct thus comprises: (1) ethanol having subscript n; (2) a Lewis Base that is not ethanol, having a coefficient p, such that the values of p and n fall within the claimed range; and (3) a particularly claimed fusion enthalpy. The Examiner has acknowledged that Dall'Occo is silent on the fusion enthalpy of the adduct, and concedes that Dall'Occo do not teach that the adducts in the Examples have the "n" and "p" values instantly claimed. However, the Examiner nevertheless has argued that Dall'Occo teach these limitations through a theory of inherency. As discussed below, Applicants respectfully submit that there is no basis for this assumption.

Dall'Occo's adduct

As is clear, Dall'Occo's component (I):

> comprises the reaction product of:
> (a) a magnesium halide in active form obtained by decomposing spherical or spheroidal adducts of a magnesium halide with an electron donor compound;
> (b) an electron donor compound;
> (c) VCl_4. (col. 2, lines 51-59, *emphasis added*)

Thus, Dall'Occo's adducts are decomposed with an electron donor. This is of course completely different from the present claims. In fact, Dall'Occo teach that the adduct having from 2 to 3.5 mol of alcohol has to be thermally dealcoholated up to less than 15%, preferably less than 10% wt of alcohol (col. 3 lines 20-26). Applicants note that 15% wt of alcohol means that there are 0.35 mol of EtOH per mol of $MgCl_2$, and that this value is far below the claimed range of 2 to 6 mol. The example in col. 4, cited by the Examiner, is even further removed from the presently claimed adducts since it uses magnesium chloride having only 5% of EtOH, however, it is in perfect accordance with Dall'Occo's requirement of a very porous support, which serves to allow the rubber to grow without adhering to the reactor walls. Thus, removal of alcohol is related to

Dall'Occo's increase of porosity. Therefore, for these reasons Dall'Occo clearly do not teach "n."

Moreover, the example also teaches very different ratios from the present claims when the magnesium chloride contains 5% EtOH. Considering the amount of ethyl benzoate and magnesium chloride used, the molar ratio between ethyl benzoate and alcohol is 0.022(p)/0.01(n), meaning that the ratio p/(n+p) is 0.68. This ratio is clearly much higher than the claimed ratio (0.1). The ratio is even further outside the claimed range of dependent claim 14. Therefore, not only do Dall'Occo fail to teach the claimed absolute amount of alcohol, it also fails to teach the claimed ratio with respect to the donor.

Examiner Improperly Finds Claimed Limitations Through Inherency

With respect to fusion enthalpy, the Examiner bases the inherency argument on the claim that:

> Dall'Occo has the same components as the adduct instantly claimed and was prepared the same way as the adduct instantly claimed. Therefore, the adduct in Dall'Occo would have the same fusion enthalpy as that instantly claimed. (Office Action, page 4)

However, as explained above this assumption has no basis, since the adduct is not the same and was not prepared in the same way. First, as shown above, the value of "n" and that of the claimed quantity p/(n+p) is different than that of the claimed range. Second, Dall'Occo's adduct is decomposed. Thus, Dall'Occo's adducts are clearly not substantially identical to those claimed, and there is no reasonable basis to support this contention. Therefore, the standard of inherency applied by the Examiner in this case is one of "could be." However, inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. *Scaltech Inc. v. Retec/Tetra L.L.C.,* 156 F.3d 1193, 51 USPQ2d 1055 (Fed. Cir. 1999); *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999

Indeed, the MPEP outlines a high standard for inherency:

> The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed

> rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981). "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (MPEP 2112(IV), emphasis added)

Therefore, because there is no proper basis for an assumption of inherency, the Rejection should be withdrawn for that reason alone.

However, even if the fusion enthalpy were inherent, the Examiner has not offered any reason why one skilled in the art would formulate an adduct containing ethanol and the recited Lewis Base in the particularly claimed ratios, and having the particularly claimed fusion enthalpy. The Examiner certainly hasn't offered any reason why one skilled in the art would construct a catalyst component using the claimed adduct. A proper analysis under 35 U.S.C. §103 requires showing that "there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) "We must still be careful not to allow hindsight reconstruction of references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention." *Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 n.3 (Fed. Cir. 2008). In this case, the Examiner has clearly not provided a reason as to why the ordinary artisan would have formulated an adduct or catalyst component containing the adduct, simultaneously having all of the claimed features, based on the cited reference.

Dall'Occo teach away from present claims

In addition to the arguments presented above, Applicants submit that with respect to claims 18, 21, 22, and 27, Dall'Occo teach away from the claims. Dall'occo do not teach to combine, in whatever form, an adduct MgCl2nETOH, where n is from 2 to 6, with an electron donor in order to form the adduct of the present invention. In fact, Dall'Occo's catalyst component is obtained by contacting (a) a magnesium halide in active form, which is in turn obtained by decomposing spherical or spheroidal adducts of magnesium halide with an electron

donor; (b) an electron donor compound, (c) a VCl_4 compound. Thus, according to Dall'occo the electron donor compound (b) is to be reacted with a magnesium halide and not with the adduct. The decomposition of the adduct generates the magnesium chloride. Thus, in Dall'Occo, the disclosure of reacting an electron donor with magnesium halide clearly means not reacting it with the adduct, because it is the disappearance of the adduct (decomposition) which causes formation of magnesium halide. In fact, by teaching the decomposition of the adduct, Dall'Occo teach away from the present claims. It is well-settled under Federal Circuit law that a *prima facie* case of obviousness has been rebutted when the cited art teaches away from the invention, *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997).

No predictability in changes suggested by the Examiner which would render Dall'Occo unsatisfactory for its intended purpose.

As discussed above, Dall'Occo react an electron donor compound with an adduct to cause its decomposition. To modify Dall'Occo as suggested by the Examiner, i.e., to delete the decomposition of its adduct, would render it unsatisfactory for its intended purpose because it would eliminate a critical step for the preparation of its catalyst. It is well settled that if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984.) Further, there would be no predictability in the changes suggested by the Examiner. As acknowledged by the Examiner, Dall'Occo do not teach the limitation "n" or the limitation related to p/(n+p), and the values shown in the example of column 4 are significantly outside the claimed range. There would thus be no predictability in modifying Dall'Occo's material from the values of "n" and "p" exemplified to those claimed, as suggested by the Examiner. Such modifications would certainly not meet the the Supreme Court's standard for a Rejection under §103, which requires a finding of a finite number of identified, predictable solutions *KSR Int'l Co. v. Teleflex Inc.,* 127 S. Ct. 1727, 1742 (2007).

Therefore, for all the reasons above, Applicants respectfully submit that a *prima facie* case of Obviousness has not been made out by the Examiner. Reconsideration and withdrawal of the Rejection respectively is respectfully requested.

Therefore, Applicants respectfully request that a timely Notice of Allowance be issued in this case. Should the Examiner have questions or comments regarding this application or this Amendment, Applicants' attorney would welcome the opportunity to discuss the case with the Examiner. The Commissioner is hereby authorized to charge U.S. PTO Deposit Account 50-4380 in the amount of any fee required for consideration of this Amendment.

Respectfully submitted,

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I hereby certify that this correspondence is being transmitted via the U.S. Patent and Trademark Office electronic filing system (EFS-Web) to the USPTO on November 1, 2011.

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